AMSAT News Service Weekly Bulletins
Issue: ANS-154
Date: 1989-06-03
Sources: amsat-ans-1989-06-04-92cc674c07.txt

SB ALL @ AMSAT $ANS-154.01
AMSAT-UK/RSGB DATASPACE '89

HR AMSAT NEWS SERVICE BULLETIN 154.01 FROM AMSAT HQ
SILVER SPRING, MD JUNE 3, 1989
TO ALL RADIO AMATEURS BT

AMSAT-UK And RSGB Join Together To Sponsor "DATASPACE '89"

AMSAT-UK and the Radio Society of Great Britian (RSGB) will combine their efforts this year to sponsor a joint symposium dealing with OSCAR satellites, digital communications, and educational uses of amateur radio satellites. Because of the combined theme of "data communications" and amateur satellites, the name of this year's AMSAT-UK/RSGB Data Symposiums will be appropriately known as "DATASPACE '89." With the launch of the MICROSATs and UOSAT D & E later this year, OSCAR enthusiasts should find this combination particularly interesting. As in years past, the University of Surrey will be the meeting place for this combined colloquia. The following is the "line-up" of programs planned for the weekend of July 27-31:

Thursday,	June 27th:	International Space Assembly
Friday,	June 28th:	RSGB Data Symposium
Saturday	June 29th:	Combined Dataspace Tryst
Sunday	June 30th:	AMSAT-UK Space Colloquium
Monday	June 31st:	Satellites-in-Education Colloquium

If you are interested in finding out more details concerning accommodations and the programs to be presented, contact:

Ron Broadbent, G3AAJ
94 Herongate Road
Wanstead Park
London E12 5EQ England

Tel: 01-989-6741

/EX
SB ALL @ AMSAT $ANS-154.02
PHASE IV MODEL "ROLLED-OUT"

HR AMSAT NEWS SERVICE BULLETIN 154.02 FROM AMSAT HQ
SILVER SPRING, MD JUNE 3, 1989
TO ALL RADIO AMATEURS BT

Full-Scale Model Of AMSAT-NA Phase IV Geostationary Satellite Completed

On May 24,1989 a "full-scale" model of the AMSAT-NA Geostationary satellite concept was rolled-out for presentation and a photo session at Weber State College (WSC) in Ogden, Utah. Many AMSAT-NA members will remember that the AMSAT-NA Board of Directors voted to accept a "statement-of-work" presented by WSC last November to build this "mock-up" of the Phase IV satellite as part of a "senior" engineering project for students enrolled in the WSC Center for Aerospace Technology (CAST). Present for the "roll-out" was AMSAT-NA's Chief Engineer, Dick Jansson (WD4FAB). Upon seeing the completed model for the first time, Dick pointed out that the size of this Phase IV spacecraft is "awesome." He mentioned that this twelve-sided, 30 inch high, 8 foot diameter model is so large, he saw one student crawl inside and disappear; Dick added: "This has to be the largest satellite AMSAT has ever designed." After the

photo session, the Phase IV model was put into a special crate and will be trucked to Dallas for the HAMCOM/ARRL National Convention in Arlington, TX. It will be displayed in the main lobby of the HAMCOM convention center in keeping with the ARRL's slogan, "FROM SPARK ...1914-1989...TO SPACE."

After HAMCOM, the Phase IV model will be returned to WSC where it will be used as a "test-bed" for future design work on the Phase IV concept. WD4FAB commented that the work put forth by the "highly dedicated" CAST students on this "high fidelity" model was "superb." It is estimated that over 10,000 hours of donated student labor went into building this model. AMSAT-NA was would like to express its appreciation to Bill Clapp, Director of the CAST, and, to the students of WSC for this excellent "prototype" model.

/EX
SB ALL @ AMSAT $ANS-154.03
ZRO TESTS SCHEDULE ANNOUNCED

HR AMSAT NEWS SERVICE BULLETIN 154.03 FROM AMSAT HQ
SILVER SPRING, MD JUNE 3, 1989
TO ALL RADIO AMATEURS BT

The Popular "ZRO Tests" Are Scheduled To Begin Again In July

The ZRO Memorial Technical Achievement Award Program, or just "ZRO Test" will be reactivated in July following the mid-June reorientation of AMSAT-OSCAR-13 (AO-13). This activity is a test to evaluate the operating skill and equipment performance. During a typical ZRO run, a control station will send numeric code groups using CW at 10 WPM. At the beginning of the ZRO Test run, the uplink power from the control station is set to match the general beacon downlink strength. This is level "zero". The control operator will then send and repeat a random five-digit number; next, he will lower his uplink power by 3 dB (half power) and repeat the procedure with a new random number. This will continue to a level 27 dB below the beacon (level "nine"). A participating listener then monitors the downlink signals until he can no longer copy the numbers. Those who can hear the beacon will qualify for the basic award by copying the code group heard at level "zero". The challenge is to improve your home-station performance to a point where the lower-level downlink signals can be copied (levels 6 through 9). The best reported achievement since the inception of the program several years ago via AO-10 came from W7ID. Recently, W7ID copied four out of five digits correctly at level 9 on a run via AO-13 earlier this year. The estimated EIRP from the control station, WA5ZIB, was just over ONE Watt!

The following schedule of Mode "B" ZRO tests with a downlink frequency of 145.840 MHz was chosen for convenient operating times and favorable "squint" angles. AO-13 users who don't wish to participate in the ZRO Test are asked to avoid operating on or near that frequency during these ZRO Test times. Please post the following list of times in your ham shack for the ZRO Tests so that you will have them handy for quick reference:

Saturday	July 1, 1989	at 21:10 UTC
Saturday	July 8, 1989	at 04:50 UTC
Sunday	July 16, 1989	at 07:20 UTC
Saturday	July 22, 1989	at 20:50 UTC
Saturday	July 29, 1989	at 04:20 UTC
Saturday	August 12, 1989	at 20:20 UTC

Any changes will be announced as soon as possible via the AMSAT HF and AO-13 Operations Nets. ZRO brochures are available from WA5ZIB, Andy MacAllister, AMSAT V.P. User Operations, 14714 Knightsway Drive, Houston, TX 77083 for an S.A.S.E. with one unit of postage. The brochure characterizes test procedures, means for obtaining certificates, and gives some historical background about the program. All listener reports with date of test and numbers copied should be sent to WA5ZIB at the address above. A report will be returned

verifying the level of accurate reception. Good luck!

/EX
SB ALL @ AMSAT $ANS-154.04
CALL FOR PAPERS FOR JOURNAL

HR AMSAT NEWS SERVICE BULLETIN 154.04 FROM AMSAT HQ
SILVER SPRING, MD JUNE 3, 1989
TO ALL RADIO AMATEURS BT

Editor of AMSAT Journal Is Soliciting Papers And Articles For Next Journal

By now, all current AMSAT-NA members should received their first issue of "The AMSAT Journal." With the successful publication of this first issue, Editor Joe Kasser (G3ZCZ/W3) is making an appeal for papers and articles which he will use in the second issue of "The AMSAT Journal." Joe is looking for papers which deal with AO-13 operations, construction projects, software, and in general, articles which deal with all aspects of OSCAR satellite operation. If you have a article you would like to submit for publication, please send it to AMSAT-NA Headquarters, P.O. Box 27, Washington, D.C., 20044, ATTENTION: Joe Kasser. Joe encourages all OSCAR enthusiast to submit your ideas for publication. Perhaps you have built something or have learned something which might be helpful to other AMSAT users -- whatever that might be -- you are invited to write for this "banner" publication of AMSAT-NA.
SB ALL @ AMSAT $ANS-154.05
AMSAT SHORT BURSTS

HR AMSAT NEWS SERVICE BULLETIN 154.05 FROM AMSAT HQ
SILVER SPRING, MD JUNE 3, 1989
TO ALL RADIO AMATEURS BT

AMSAT Short Bursts

AMSAT-NA has learned from Ron Broadbent, G3AAJ, that the launch of RS 12/13 is imminient. This information was made available from reliable Russian sources familiar with amateur satellite activities in the Soviet Union. It is felt by G3AAJ's colleagues in the Soviet Union that the launch of RS 12/13 will occur sometime in June. AMSAT-NA urges all OSCAR enthusiasts to monitor the planned beacon frequencies of 29.408 MHz for RS 12 and 29.4582 MHz for RS 13. The "robot" downlink frequencies for RS 12/13 will be 29.4543 MHz and 29.5043 MHz, respectively. If you should hear the CW beacon on these frequencies for RS 12/13, please contact AMSAT HQ's [(301) 589-6062] so that this information can be passed along to AMSAT Net Control Stations for announcement during the many regular AMSAT Nets each week. Please include the date, time, frequency, your call, and QTH.

The following will be the operating schedules for AMSAT OSCAR-13 for the next several months. Please post this in a convenient place in your ham shack for quick reference.

M de VK5AGR 14May89: *** AO-13 Transponder Schedule Update ***
                      14May89 to 14Jun89
Mode-JL from MA 160 to MA 200 ! Mode-B from MA 200 to MA 160
Also, for a trial period the OMNI-directional 70cm antenna will
be connected to the Mode-B RCVR from MA 20 to MA 40. These changes
have been introduced to enable stations who have access around
perigee to experiment with perigee operation. Mode S unchanged.
14May89: BLON/BLAT 212.0/+2.4 with a drift rate of 0.016/-0.061 deg/day,
respectively.

                        O S C A R - 1 3

Date   : 14Jun89 until 16Aug89 ! 16Aug89 until 16Nov89
Attitude: 180/0   !   210/0

```
Mode-B  :     MA   0 to MA 110  !     MA   3 to MA 160
Mode-JL :     MA 110 to MA 145  !     MA 160 to MA 200
Mode-B  :     MA 145 to MA 255  !     MA 200 to MA 240
OFF     :              %        !     MA 240 to MA   3
Mode-S  :     MA 150 to MA 160  !     MA 210 to MA 222
```

Transponders will be in operation during the whole orbit from June 14 until Aug 16 due to excellent sunangle and power budget. No perigee operation between August and November due to perigee solar eclipses!

AMSAT is seeking additional Area Coordinators throughout North America. These additional members of the Field Operations organization are needed to support the expected inrush of activity and excitement centered about the launch of an additional six or seven amateur radio satellites this year. AMSAT-NA is seeking those who wish to promote the Amateur Radio Satellite program, and primarily, those experienced satellite users who will serve as "Elmers" for aspiring satellite enthusiasts. If you are interested in joining this team of "make it happen" amateurs, contact the AMSAT VP of Field Operations:

Jack Crabtree, AA0P
4327 W. Bellewood Dr.
Littleton, CO 80123
(303) 795-7736

Many AO-13 users are unaware that there is an AMSAT Operations Net which is conducted on AO-13 several times each month to help answer questions about OSCAR satellites and to provide information about the many exciting things going on in AMSAT. The following is a list of the times for the Ops Net. Please place this list in a convenient place in your OSCAR station so that you won't miss out on this interesting net which is offered as a service to all AMSAT members.

Here is the Ops Net schedule through June:

```
Date     UTC    orb-phs   NCS

04 Jun  0300    746-045          (03 Jun local)
11 Jun  0000    760-152          (10 Jun local)
18 Jun  0100    775-092   W0RPK  (17 Jun local)
25 Jun  0300    790-055          (24 Jun local)
```

Nets can be held on B or JL, but if the AO-13 satellite schedule is changed such that the Ops Net falls during an "off" period, it will be rescheduled. Downlink frequencies are 145.950 MHz and 435.970 MHz for Mode B and JL, respectively. All these are for AO-13 but AO-10 is sometimes used when available.

The following is the operating schedule for FO-12 for the rest of the month of May and for June:

```
DATE       MODE      OPERATING PERIOD
06/09/89    JA        04:25 UTC until 21:20 UTC
06/21/89    JA        01:43 UTC until 18:38 UTC
06/24/89    JA        01:03 UTC until 17:58 UTC
06/29/89    JA        00:35 UTC until 15:29 UTC

de DB2OS  01May89:   ***  AO-10 TRANSPONDER SCHEDULE ***
                          01May89 to 13Jul89

                   Mode-B  : from  MA 025 to MA 225
                   OFF     : from  MA 226 to MA 024
```

All radio amateurs who live in the Northern California area are reminded of the "Shasta SpaceCon '89" which will be held in Weed, CA on June 17th at the

Student Center of the College of the Siskiyous. This all day seminar is designed to be a "beginners introduction" OSCAR satellites. Many excellent speakers from AMSAT-NA and Project OSCAR will be present. For more information about this fine seminar, please contact Bob Dalleske (W6AMW) at (916) 964-3154.

/EX

Posted: Thu, Jun 1, 1989 5:20 PM GMT Msg: AGIJ-3961-4251
From: AMAC
To: DCOWDIN, RMYERS
CC: AMSAT, OPS
Subj: New ZRO Test Schedule

The ZRO Memorial Technical Achievement Award Program, or just "ZRO Test" will be reactivated in July following the mid-June reorientation of AMSAT-OSCAR-13. This activity is a test of operating skill and equipment performance.

During a typical ZRO run, a control station will send numeric code groups using CW at 10 words-per-minute. At the beginning of the run, uplink power from the control station is set to match the general beacon downlink strength. This is level "zero". The control operator will send and repeat a random five-digit number, then lower his uplink power by 3 dB (half power) and repeat the procedure with a new random number. This will continue to a level 27 dB below the beacon (level "nine").

A participating listener monitors the downlink signals till he can no longer copy the numbers. Those who can hear the beacon will qualify for the basic award by copying the code group heard at level "zero". The challenge is to improve home-station performance to a point where the lower-level downlink signals can be copied (levels 6 through 9).

The best reported achievement since the inception of the program several years ago via AMSAT-OSCAR-10 came from W7ID. Jeff copied four out of five digits correctly at level 9 on a run via A-O-13 earlier this year. The estimated EIRP from the control station, WA5ZIB, was just over ONE Watt!

The following schedule of Mode "B" ZRO tests with a downlink frequency of 145.840 MHz was chosen for convenient operating times and favorable squint angles.

Saturday July 1, 1989 at 2110 UTC
Saturday July 8, 1989 at 0450 UTC
Sunday July 16, 1989 at 0720 UTC
Saturday July 22, 1989 at 2050 UTC
Saturday July 29, 1989 at 0420 UTC
Saturday August 12, 1989 at 2020 UTC

Any changes will be announced as soon as possible via the AMSAT HF and A-O-13 Operations Nets. ZRO brochures are available from WA5ZIB, Andy MacAllister, AMSAT V.P. User Operations, 14714 Knightsway Drive, Houston, TX 77083 for an S.A.S.E. with one unit of postage ($0.25 U.S., $0.30 Canada, $0.90 Overseas). The brochure characterizes test procedures, means for obtaining certificates and gives some historical background about the program.

All listener reports with date of test and numbers copied should be sent to WA5ZIB at the address above. A report will be returned verifying the level of accurate reception. Good luck!

Posted: Sat, Jun 3, 1989 1:15 PM GMT Msg: LGIJ-3962-8488
From: HANSV
To: OPS
CC: DCOWDIN
Subj: Z2 SATELLITE FIELD DAY OPS

ZIMBABWI (Z2) FIELD DAY STATION ON AO10 and 13

The Zimbabwi Amateur Radio Society will be operating a field day station on both Oscar 10 and Oscar 13 on Saturday 17th June as part of the Society's Annual General Meeting which will be held in the capital, Harare on Sunday 18th June, 1989.

The field day will be held on a Range near Harare and is being organised by the Mashonaland Branch of the ZARC. The call sign to be used will be Z21JHE. The satellite station will be on the air from 09:00 UTC till 14:00 UTC.
Predictions indicate that passes of both satellites will favour VK, ZL, JA and ZS.
The event is being organised by Des Z21GH.

73 Hans ZS6AKV .

Posted: Sun, Jun 4, 1989 7:37 AM GMT Msg: NGIJ-3963-1320
From: CDUNCAN
To: ops
Subj: NETS HELD: net report 6/3 (6/4)

The AMSAT Operations Net was held on 04 June 89 at 0300 UTC (3 June local time) on 145.950 MHz, mode B. Since this was early in the pass with very high squint angles, conditions were expected to be very poor. I found that switching to LHCP on the downlink moderated the severe spin modulation some. Switching polarization on the uplink only made signals weaker without changing the apparent spin signature enough to notice.

There were five checkins, WD0GML, Mike; WB6GFJ, Ross; W6SYA, Bob; WA4UPD, Reid; and WA9PZL, Roger. Net control was wM3

Mike, WD0GML, discussed the new public access sub-board on his BBS which is a SatFoxHunt meeting place. Activity in this area is expected to pick up soon. AO-10 perigee measurements were to be taken this morning by W0RPK and WA9RNQ.

W6SYA was located just a few miles from net control and was heard 59 on the uplink. Net control experienced moderately disruptive intermod and could probably use a more selective front end.

The net was closed at 0323 UTC.

Next week's net will be held at 0000 UTC on 11 June 89, 10 June local in the U.S.

73, Courtney, N5BF